

# Granulomatous Hepatitis as Primary Manifestation of Disseminated Histoplasmosis in an Immunocompetent Host Diagnosed on EUS FNA and Liver Biopsy

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## Introduction

- Disseminated histoplasmosis (DH) presents as primarily lung manifestations with extrapulmonary involvement in immunocompromised hosts.

## Take Home Points

- Granulomatous hepatitis is an uncommon primary manifestation of DH in an immunocompetent host.
- Clinicians must have a high degree of suspicion for DH in patients with fever of unknown origin, especially in endemic areas regardless of immunologic status.

## Case

- 25-year-old female presented with one month of fever, fatigue, myalgias, 30-pound weight loss, cough, nausea, vomiting, epigastric pain.

### History

- Has lived in Midwest and Southwestern US. Traveled to Myrtle Beach one month prior. Works at a nursing school. Multiple ED visits with negative COVID tests and empirically treated for pneumonia with antibiotics.

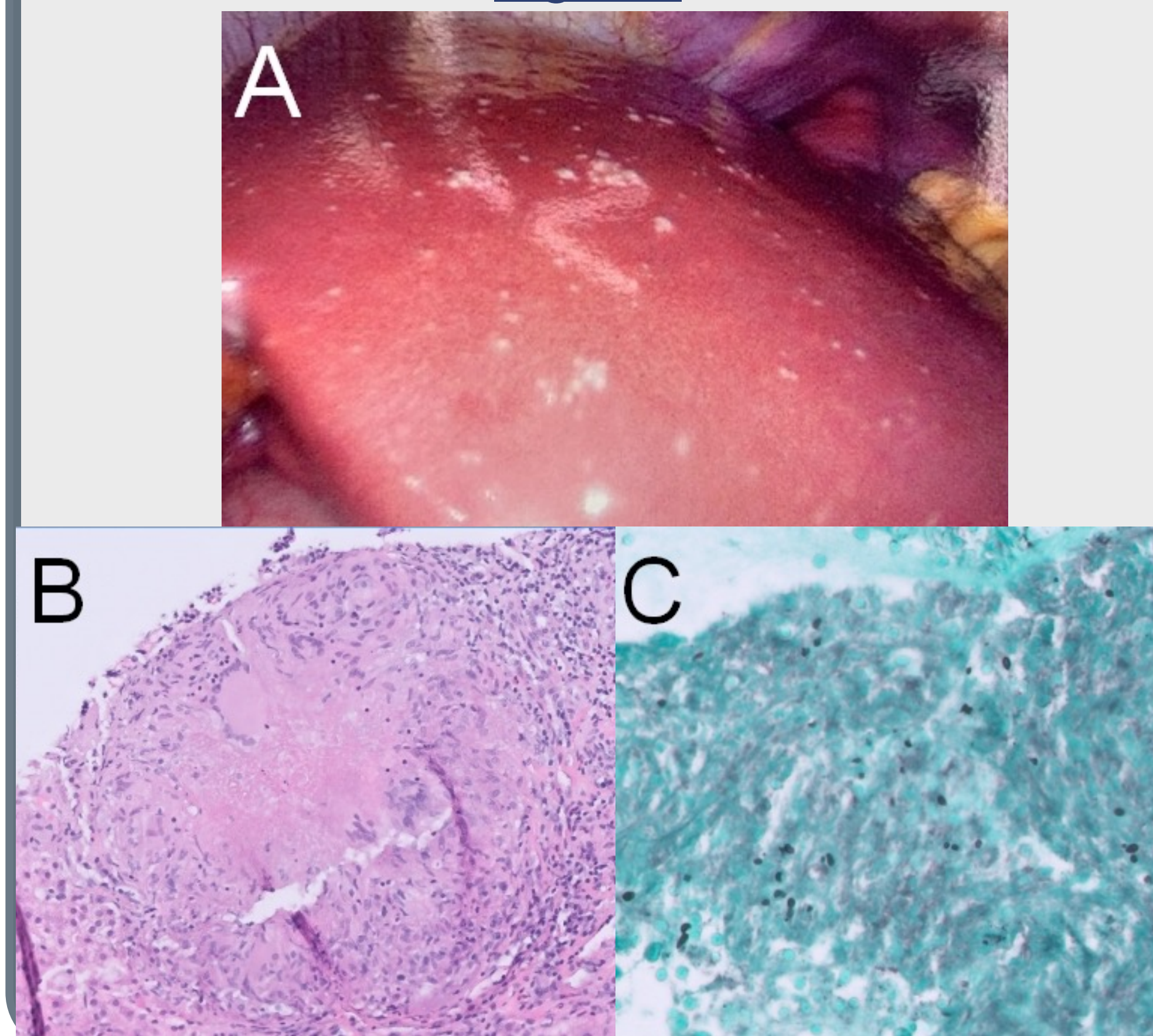
### Labs/Imaging

- Elevated liver enzymes: ALT 463, AST 172, ALP 161, TB 1.9, DB 1.2.
- Workup negative for viral/autoimmune hepatitis, pregnancy, sarcoidosis, tuberculosis, HIV.
- CT scan: suspected gallstones, 9 mm LLL noncalcified nodule.
- EUS/FNA: normal common bile duct, gallbladder sludge, enlarged porta hepatis lymph nodes which underwent fine needle aspiration (FNA).

### Clinical Course

- Diagnosed with biliary colic, underwent cholecystectomy with white plaques noted on the liver surface (A).
- Liver biopsy/FNA showed necrotizing granulomas (B) and fungal yeast on GMS stain (C).
- Although histoplasmosis urine and blood antigens were negative, histoplasmosis complement fixation was >1:256.
- Did not tolerate itraconazole, requiring amphotericin B for 5 days. Discharged on voriconazole, stopped after 5 weeks due to increasing ALP.
- At one year follow-up, symptoms resolved with normal transaminases.

## Figures



## Discussion

- DH is a systemic granulomatous disease caused by *Histoplasma capsulatum* endemic to Ohio, Mississippi River Valley, and southeastern US.
- DH more commonly affects immunocompromised hosts with AIDS, immunosuppressants, and organ transplant.
- Gastrointestinal involvement is common in DH (70-90%) with liver involvement in 90%. However, granulomatous hepatitis as primary manifestation of DH is rare (2-10% of liver biopsies). Hepatic granulomas are seen in <20%.

### Presentation

- Nonspecific symptoms: fever, sweats, weight loss, myalgias.
- Serum/urine antigens may be negative.

### Diagnosis

- Gold standard is identifying yeast on tissue stains.

### Treatment

- Induction therapy with amphotericin B followed by one year of itraconazole.
- Shorter treatment duration may be effective in immunocompetent hosts.